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ABSTRACT

The purpose of this study was to determine the pedagogical inservice needs of postsecondary agriculture instructors in the United States by type of institution, and to determine the types of inservice activities available to postsecondary agriculture instructors by type of institution. A survey questionnaire was mailed to a stratified random sample of 430 instructors. The 306 instructors who replied rated 118 pedagogical competencies and 19 inservice activities. The results of the survey showed that full-time instructors expressed greater need for inservice education regarding pedagogical competencies than part-time instructors. Part-time instructors rated availability of inservice activities at their institutions higher than full-time instructors did. However, more than one-third of the part-time instructors did not know what inservice activities were available at their institutions. Instructors at institutions offering bachelor's degrees and above in agriculture had less inservice need for pedagogical competencies than instructors in institutions offering two-year degrees or less. Instructors in the bachelor's degree-granting institutions see their greatest pedagogical inservice need to be "teaching with the aid of a microcomputer," while instructors at institutions granting lower degrees perceived their highest inservice need to be "recruiting students" for their programs. The results of the study can be used to help educators and supervisors of postsecondary agriculture instructors to meet the divergent needs of instructors at different types of institutions. Appendices contain letters of correspondence, the final questionnaire, and tables of statistical data. (KC)

FINAL REPORT

PEDAGOGICAL INSERVICE NEEDS AND ACTIVITIES OF POSTSECONDARY AGRICULTURE INSTRUCTORS IN THE UNITED STATES

Contract Number 83-5010

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June 30, 1985

Pennsylvania Department of Education
Bureau of Vocational Education
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TABLE OF CONTENTS

INTRODUCTION

Abstract

83-5010: Pedagogical Inservice Needs and Activities of Postsecondary Agriculture Instructors in the United States

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The purpose of this study was to determine the pedagogical inservice needs of postsecondary agriculture instructors in the United States.

Objectives

1. To determine pedagogical inservice needs of part-time and full-time postsecondary agriculture instructors in the United States by type of institution.
2. To determine the types of inservice activities available to part-time and full-time postsecondary agriculture instructors in the United States by type of institution.

To facilitate the analysis of data, the following research hypotheses were formulated:

H_1 Pedagogical inservice needs of part-time and full-time postsecondary agriculture instructors will differ significantly among the types of institutions.

H_2 Pedagogical inservice needs of part-time postsecondary agriculture instructors will be significantly greater than pedagogical inservice needs of full-time postsecondary agriculture instructors.

H_3 The inservice activities available to part-time and full-time postsecondary agriculture instructors will differ significantly among the types of institutions.

H_4 The inservice activities available to full-time postsecondary agriculture instructors will be significantly greater than the types of inservice activities available to part-time postsecondary agriculture instructors.

Outcomes:

1. One hundred eighteen pedagogical competencies and 19 inservice activities were rated by 306 postsecondary agriculture faculty at 76 institutions.
2. Postsecondary institutions were stratified into three types: Type I--institution offered postsecondary agriculture programs but awarded less than Associate degree; Type II--institution offered postsecondary agriculture programs and awarded the Associate degree as the highest degree; and Type III--institution offered postsecondary agriculture programs and awarded, in addition to the Associate degree, baccalaureate or higher degrees.
3. Full-time instructors expressed greater need for inservice education regarding pedagogical competencies than part-time instructors.
4. Part-time instructors rated availability of inservice activities at their institutions higher than full-time instructors. However, more than one-third of the part-time instructors did not know what inservice activities were available at their institutions.

Audience:

The results of this study are beneficial to faculty, staff developers and teacher educators of postsecondary agriculture instructors.

Published Materials:

Final report: "Pedagogical Inservice Needs and Activities of Postsecondary Agriculture Instructors in the United States." Ph.D. Thesis, The Pennsyvlania State University, 1985, 174 pp.

METHODS

Purpose of the Study

The primary purpose of this study was to determine the pedagogical inservice needs of postsecondary agriculture instructors in the United States. A secondary purpose was to determine the inservice activities available to the instructors. To achieve the overall purposes, the study attempted to accomplish the following specific objectives:

1. To determine pedagogical inservice needs of full-time and part-time postsecondary agriculture instructors in the United States by type of institution.
2. To determine of inservice activities available to full-time and part-time postsecondary agriculture instructors in the United States by type of institution.

Hypotheses

To facilitate the analysis of data, the following hypotheses were formulated:

H_1 Pedagogical inservice needs of full-time and part-time postsecondary agriculture instructors will differ significantly among the types of institutions.

H_2 Pedagogical inservice needs of full-time and part-time postsecondary agriculture instructors will be significantly greater than pedagogical inservice needs of full-time postsecondary agriculture instructors.

H_3 The inservice activities available to full-time and part-time postsecondary agriculture instructors will differ significantly among the types of institutions.

H_4 The inservice activities available to full-time postsecondary agriculture instructors will be significantly greater than the types of inservice activities available to part-time postsecondary agriculture instructors.

Design of Study

After a review of literature a questionnaire was developed to ascertain information from postsecondary agriculture instructors. The four parts of the questionnaire were institutional information, instructor characteristics, pedagogical inservice needs, and inservice activities. Instructors were asked to respond to 20 questions in parts one and two. In part three instructors were asked to rate a list of 118 pedagogical competencies regarding their need for inservice education for each competency. The rating scale was as follows: 1=no need, 2=somewhat needed, 3=needed, and 4=greatly needed. Part four of the questionnaire contained a list of 19 inservice activities. Instructors were asked to rate the availability of each inservice activity at their institution. The rating scale was as follows: 1=virtually never available, 2=seldom available, 3=usually available, and 4=almost always available.

Prior to distributing copies of the questionnaire to the target population of postsecondary agriculture instructors, to pilot tests were conducted. Six faculty and eight graduate students in the Department of Agricultural and Extension Education at The Pennsylvania State University were given a copy of the preliminary questionnaire along with a cover letter. Participants in this pilot test were asked to make comments on the questionnaire which they thought would improve its effectiveness in carrying out the objectives of the study. The preliminary questionnaire was revised based upon questionnaires returned by six faculty and six graduate students.

The revised questionnaire was then mailed to a total of 40 full-time and part-time instructors at Kirkwood Community College in Iowa and the Williamsport Area Community College in Pennsylvania for a pilot test in the field. Twenty instructors returned the questionnaire. The

final questionnaire was developed after a revision of the pilot-tested questionnaire based on comments from the 20 instructors.

The questionnaire was mailed to a stratified random sample of 430 instructors. Stratification was by type of institution and employment status of instructors (full-time, part-time). Four hundred and thirty names of instructors were received from contact persons for or coordinators of agriculture programs at 76 institutions offering postsecondary agriculture programs. A response rate of 71.2 percent was received. Of the questionnaires returned, 306 were useable (Type I, 59; Type II, 140; Type III, 107).

The types of institutions in this study were as follows:

Type I--institution offers postsecondary agriculture programs but awards less than the Associate degree.

Type II--institution offers postsecondary agriculture programs and awards the Associate degree as the highest degree.

Type III--institution offers postsecondary agriculture programs and awards, in addition to the Associate degree, Baccalaureate or higher degrees.

The definition of a full-time and a part-time instructor was as follows:

Full-time instructor--a postsecondary agriculture instructor who currently is employed on a full-time basis and teaches more than nine contact hours per term.

Part-time instructor--a postsecondary agriculture instructor who is employed and paid on a term basis to teach up to nine contact hours per term and has taught at least one course in each of the last two academic years (1983-84 and 1984-85).

The data from returned questionnaires were entered for processing and analysis into computer facilities at The Pennsylvania State University.

ANALYSIS

The findings of the study are summarized as follows.

Demographic Characteristics of Instructors

1. Over 90 percent (92.5%) of the instructors were male. More females were employed in Type I institutions (11.9%) compared to Type II (8.0%) or Type III (5.6%) institutions.
2. Almost 60 percent (59.6%) of the instructors were between 24 and 45 years of age. Over one-fourth (26.0%) of the instructors were between 46 and 55 years of age. A greater percentage of instructors at Type III institutions (20.2%) were over 55 years of age compared to instructors in Type I (11.9%) and Type II (9.4%) institutions. The mean age for instructors in Type I, Type II, and Type III institutions was 42.6, 42.9, and 45.1, respectively.
3. Almost 90 percent (89.5%) of the instructors were employed on a full-time basis. More instructors (12.3%) were employed in Type II institutions than in Type I (8.5%) or Type III (9.3%) institutions.
4. Almost one-third (31.0%) of the instructors were employed on a 9-month contract. Fewer than one-third (29.0%) of the instructors were employed on a 12-month contract. A 12-month contract was more common in Type III institutions (41.5%) than in Type I (22.0%) or Type II (22.5%) institutions.

5. Over one-half (57.4%) of all respondents held the professional title of instructor. Almost all (96.6%) of the respondents from Type I institutions held the professional title of instructor. Over two-thirds of the respondents in Type II institutions were classified as instructors. Almost three-fourths (72.6%) of the respondents in Type III institutions held assistant professor, associate professor, or professor titles.
6. Over one-half (51.8%) of the respondents have been employed between one and four (28.5%) and five and eight (23.4%) years in their present position. One-fifth of the respondents had been employed between nine and twelve years in their present position. The mean number of years respondents had been employed in their present position by type of institution was Type I, 8.8; Type II, 9.0; and Type III, 10.8.
7. Over one-fifth (20.6%) of the respondents were assigned over 50 percent of their teaching responsibility in horticulture. Over one-fourth (25.2%) of the respondents in each type of institution marked "other." Of the respondents who had over 50 percent assignment in one of the eight instructional areas, the respondents in Type I institutions more commonly taught agricultural mechanics (19.2%), horticulture (19.2%), or agricultural business (15.4%). About one-fourth (25.4%) of the instructors in Type II institutions were assigned over 50 percent of their teaching responsibility in horticulture. Animal science was indicated by the highest percentage (22.1%) of instructors in Type III institutions. Only one respondent was assigned over 50 percent of their teaching responsibility

in wildlife and fisheries. The respondent was employed in a Type I institution.

8. Almost one-half (47.0%) of the respondents held a masters degree as the highest degree. Slightly more than one-fourth (27.5%) of the resondents held the doctorate. The majority (61.7%) of respondents in Type III institutions held the doctorate. Only 12.2 percent of the respondents in Type II institutions held the doctorate. No respondent in Type I institutions held the doctorate. The majority of respondents in both Type I (56.1%) and Type II (55.7%) institutions held the masters as the highest degree.

9. The majority (59.7%) of instructors had no teaching experience in vocationial agriculture at the secondary level. However, the majority (57.6%) of respondents in Type I institutions and almost one-half (49.3%) of the respondents in Type II institutions had taught vocational agriculture at the secondary level. The mean number of years teaching experience in vocational agriculture at the secondary level for respondents in Type I, Type II, and Type III institutions was 5.2, 3.8, and 1.2, respectively.

10. Approximately one-fourth (25.1%) of the respondents had one to five years teaching experience at the postsecondary level. More respondents in Type II institutions (35.7%) had six to ten years teaching experience at the postsecondary level compared to respondents in Type I (30.0%) or Type III (24.2%) institutions. More respondents in Type III institutions (35.1%) possessed 16 or more years of teaching experience at the postsecondary level than respondents in Type I (14.0%) or

Type II (23.8%) institutions. The mean number of years teaching experience in agriculture at the postsecondary level for respondents by institution was Type I, 9.5; Type II, 10.2; and Type III, 13.0.

11. Almost one-third (30.0%) of the respondents had no years of post-high school employment in business or industry related to their instructional area. Almost one-half (47.2%) of the respondents in Type III institutions had no post-high school employment in business or industry related to their instructional area; a smaller percentage of instructors in Type I (18.6%) and Type II (21.7%) institutions had no such experience. The mean number of years of agribusiness employment experience for respondents in the three types of institutions was Type I, 8.3; Type II, 6.4; and Type III, 3.8.
12. Almost two-thirds (74.6%) of the respndents in Type I and about one-half (47.8%) of the respondents in Type II institutions were members of their state vocational agricultural teachers association. A majority of the respondents in Type I institutions also held membership in the National Vocational Agricultural Teachers Association (59.3%) and almost two-thirds (64.4%) held membership in the American Vocational Association. Of the seven organizations listed, instructors in Type III institutions held membership most commonly (17.9%) in the National Association of Colleges and Teachers of Agriculture. Instructor membership in the American Association of Communty and Junior Colleges by type of institution was Type I, 0.0%; Type II, 3.6%; and Type III, 1.9%. Over one-half (51.9%) of the respondents in Type III, two-fifths (41.3%) of the

respondents in Type II, and one-fourth (28.8%) of the respondents in Type I institutions held membership in "other" organizations--typically, a technical association closely related to instructional area.

Pedagogical Inservice Needs

Table 1 provides a summary of competencies in the ten pedagogical competency areas which received a mean rating of 2.50 or above by respondents in the three types of institutions and by employment status (full-time, part-time). Table 2 shows rankings of the top ten pedagogical competencies which received a mean rating of 2.50 or above.

1. Twenty-six of the 118 competencies received a mean rating of 2.50 or above by respondents in Type I institutions. Six competencies received a 2.50 or above mean rating in the area of public and human relations; four in the area of teaching; three each in the areas of evaluating instruction, program planning, and coordination on-the-job (CO-OP); two each in planning for instruction and professional role; and one each in guidance and counseling, management, and student organizations. The competency "recruit students for agricultural technology program" received the highest mean rating (2.96) by respondents in Type I institutions; the competency "arrange the mechanical details of the classroom lab" received the lowest mean score (1.85).

2. Twenty-five of the 118 competencies received a mean rating of 2.50 or above by instructors in Type II institutions. Nine competencies received the 2.50 or above mean rating in the area of public and human relations. Number of competencies in other

Table 1. Summary of Competencies in Major Pedagogical Competency Areas Receiving Instructor Mean Ratings of 2.50 or Above by Types of Institution and by Instructor's Employment Status.

Major Pedagogical Competency Area	Institution Type			Instructor's Employment Status	
	Type I[a]	Type II[b]	Type III[c]	Full-time	Part-time
Planning for Instruction (N=14)	2	1	0	0	0
Teaching (N=23)	4	4	3	3	1
Evaluating Instruction (N=11)	3	1	0	1	1
Program Planning (N=10)	3	3	0	1	0
Guidance and Counseling (N=11)	1	1	0	0	0
Management (N=12)	1	1	1	1	0
Public and Human Relations (N=12)	6	9	1	8	1
Professional Role (N=9)	2	3	0	1	0
Student Organizations (N=8)	1	1	0	1	0
Coordination on-the-Job (CO-OP) (N=8)	3	2	0	1	0
Totals (N=118)	26	26	5	17	3

[a]Type I institution offers postsecondary agriculture programs but awards less than the Associate degree.

[b]Type II institution offers postsecondary agriculture programs but awards the Associate degree as the highest degree.

[c]Type III institution offers postsecondary agriculture programs & awards, in addition to the Associate degree, Baccalaureate or higher degrees.

Note: N refers to total number of pedagogical competencies.

Table 2. Rankings of the Top Ten Pedagogical Inservice Competencies (Items) Receiving a Mean Rating of 2.50 or Above.

Rank	Institution Type						Instructor Employment Status			
	I[a]		II[b]		III[c]		Full-Time		Part-Time	
	Item[d]	Mean	Item	Mean	Item	Mean	Item	Mean	Item	Mean
1	84	2.96	84	3.19	36	2.81	84	3.05	36	2.57
2	16	2.79	16	2.84	84	2.73	16	2.80	38	2.57
3	36	2.79	72	2.83	72	2.67	72	2.76	83	2.52
4	5	2.75	88	2.82	16	2.59	15	2.71		
5	15	2.74	89	2.76	15	2.51	36	2.69		
6	85	2.73	93	2.75			88	2.66		
7	88	2.71	49	2.75			92	2.66		
8	83	2.67	92	2.74			49	2.63		
9	92	2.66	15	2.73			85	2.61		
10	112	2.64	83	2.72			86	2.57		

[a]Type I institution offers postsecondary agriculture programs but awards less than the Associate degree.

[b]Type II institution offers postsecondary agriculture programs but awards the Associate degree as the highest degree.

[c]Type III institution offers postsecondary agriculture programs and awards, in addition to the Associate degree, Baccalaureate or higher degrees.

[d]Specific inservice competencies (items) are found in Appendix C.

Note: Scale for inservice needs was 1=not needed, 2=somewhat needed, 3=needed, 4=greatly needed.

areas receiving a mean rating of 2.50 or above were teaching, four; three each in program planning and professional role; coordination on-the-job (CO-OP), two, and one each in evaluating instruction, guidance and counseling, management, and student organizations. No competency in the area of planning for instruction received a mean rating of 2.50 or above. The competency "recruit students for agricultural technology program" received the highest mean rating (3.19); "construct a lesson plan received the lowest mean rating (1.73).

3. Respondents in Type III institutions indicated a mean rating of 2.50 or above for only five of the 118 competencies. Three of the competencies were in the area of teaching, one in management,and one in the area of public and human relations. The five competencies and their mean ratings were as follows: "teaching with the aid of a microcomputer" (2.81), "motivate students to learn" (2.51), "teach students to think critically and independently" (2.59), "write grant proposal to obtain funds for agricultural program" (2.67), and "recruit students for agricultural technology program" (2.73). The lowest mean rating (1.59) was for the competency "conduct a field trip."
4. Seventeen competencies received a mean rating of 2.50 or above by respondents employed full-time. The area receiving the highest number of mean ratings 2.50 or above was public and human relations (8). Three comptencies in the area of teaching received the rating of 2.50 or above. One competency in each of the following areas received a mean rating of 2.50 or above: evaluating ins ruction, program planning, management,

professional role, student organizations, and coordination on-the-job (CO-OP). "Recruit students for agricultural technology program" received the highest mean rating (3.05); the lowest was for the competency "conduct a field trip."

5. Only three competencies received a mean rating of 2.50 or above by respondents employed part-time. The three competencies were: "evaluate ones own technique and methods of instruction" (2.57), "teach with the aid of a microcomputer" (2.57), and "interpret and promote technical education to the public." The lowest mean rating was 1.55 for the competency "group students according to individual differences and needs."

Availability of Inservice Activities to Instructors

Table 3 shows the top five rankings of inservice activities which received a mean rating of 2.50 or above by respondents in the three types of institutions and by employment status.

1. Seven inservice activities received a mean rating of 2.50 or above by respondents in Type I institutions. The activity "all-day program for full-time faculty" received the highest mean rating (2.96). "Financial support for graduate study" received the lowest mean rating (1.53).
2. Five of the 19 inservice activities received a mean rating of 2.50 or above by respondents in Type II institutions. The five activities were: "faculty orientation program" (2.97), "all-day program for full-time faculty" (2.79), "funding for attendance at professional meetings" (2.64), "sabbatical leaves" (2.62), and "individual informal consultations." The lowest mean rating ws 1.73 for the competency "apprenticeship/model teacher program."

Table 3. Rankings of the Top Five Inservice Activities Receiving a Mean Rating of 2.50 or Above.

Rank	Institution Type						Instructor Employment Status			
	I[a]		II[b]		III[c]		Full-Time		Part-Time	
	Item[d]	Mean	Item	Mean	Item	Mean	Item	Mean	Item	Mean
1	2	2.96	1	2.97	10	3.17	1	2.86	16	3.42
2	1	2.95	2	2.79	16	2.88	10	2.74	1	3.09
3	16	2.88	16	2.64	1	2.72	16	2.72	2	3.06
4	4	2.74	10	2.62	6	2.70	2	2.61	10	2.89
5	5	2.70	6	2.54	17	2.55	6	2.61	3	2.86

[a]Type I institution offers postsecondary agriculture programs but awards less than the Associate degree.

[b]Type II institution offers postsecondary agriculture programs but awards the Associate degree as the highest degree.

[c]Type III institution offers postsecondary agriculture programs and awards, in addition to the Associate degree, Baccalaureate or higher degrees.

[d]Specific inservice activities (items) are found in Appendix D.

Note: Scale for inservice activities was 1=virtually never available, 2=seldom available, 3=usually available, 4=almost always available.

3. Of the 19 inservice activities, five received a mean rating of 2.50 or above by respondents in Type III institutions. The five activities were: "sabbatical leaves" (3.17), "funding for attendance at professional meetings" (2.88), "faculty orientation program" (2.72), "individual informal consultations" (2.70), and "visit to other campuses" (2.55). The lowest mean rating was 1.73 for the activity "apprenticeship/model teacher program."
4. Five of the 19 inservice activities received a mean rating of 2.50 or above by respondents employed full-time. The five actvities were: "faculty orientation program" (2.86), "sabbatical leaves" (2.74), "funding for attendance at professional meetings" (2.72), "individual informal consultations" (2.61), and "multi-session workshops/seminars" (2.50). The lowest mean rating was 1.70 for the activity "apprenticeship/model teacher programs."
5. Twelve of the 19 inservice avtivities received a mean rating of 2.50 or above by respondents employed part-time. "Funding for attendance at professional meetings" received the highest mean rating (3.42). The lowest mean rating was 2.15 for the competency "released time to develop instructional materials."
6. Over two-fifths of the respondents employed on a part-time basis indicated "don't know" for nine of the 19 inservice activities. One-half indicated "don't know" for the inservice activity "apprenticeship/model teacher program." Almost one-third (30.0%) indicated "don't know" for the inservice activity "day or evening program for part-time faculty." Respondents employed on a part-time basis were more likely

(76.7%) to know "faculty orientation program" and "single session workshops (e.g., teaching strategies)" were available at their institutions. The highest percentage of respondents employed on a full-time basis who indicated "don't know" for any of the 19 inservice activities was 23.3 percent. The one activity "day or evening program for part-time faculty" was unknown as available at the institution by 23.3 percent of the respondents employed full-time.

Tests of Hypotheses

H_1 Pedagogical inservice needs of part-time and full-time postsecondary agriculture instructors will differ significantly among the types of institutions.

A low response rate by instructors employed on a part-time basis required the researcher to use a one-way analysis of variance statistical procedure to determine if significance difference existed among the types of institutions at the 0.05 level of significance. A Scheffe Multiple Range Test was used to identify significant differences between the mean ratings of all instructors (full-time and part-time) by-type of institution. The competencies for which the hypothesis was rejected are summarized as follows-by major competency areas:

1. Planning for Instruction

   Of the eight competencies found to differ significantly, no significant difference existed for instructors:

   a. between Type I and Type II institutions for any of the eight competencies (items 1, 3, 4, 8, 9, 10, 13, 14).
   b. between Type I and Type III (items 1 and 14).
   c. between Type II and Type III (items 3, 8, 9, and 10).

2. Teaching

Of the ten competencies found to differ significantly, no significant difference existed for instructors:

a. between Type I and Type II institutions for nine of the ten competencies (items 19, 20, 22, 24, 25, 27, 28, 29, 32).

b. between Type I and Type III institutions for any of the ten competencies.

c. between Type II and Type III institutions for six of the ten competencies (items 19, 20, 25, 27, 30, 32).

3. Evaluating Instruction

No competencies were found to differ significantly by the one-way analysis of variance test.

4. Program Planning

Of the five competencies found to differ significantly, no significant difference existed for instructors:

a. between Type I and Type II institutions for any of the five competencies (items 50, 51, 52, 53, 55).

b. between Type I and Type III institutions (items 52, 53).

c. between Type II and Type III institutions (none).

5. Guidance and Counseling

Of the two competencies found to differ significantly, no significant difference existed for instructors:

a. between Type I and Type II institutions (items 60, 66).

b. between Type I and Type II institutions (none).

c. between Type II and Type III institutions (items 60, 66).

6. Management

Of the eight competencies found to differ significantly, no significant difference existed for instructors:

a. between Type I and Type II institutions (all eight).

b. between Type I and Type III institutions (items 71, 73, 75).

c. between Type II and Type III institutions (items 74, 78).

7. Public and Human Relations

Of the nine competencies found to differ significantly, no significant difference existed for instructors:

a. between Type I and Type II institutions (all eight).

b. between Type I and Type III institutions (items 82, 83, 84, 88, 89, 90, 91, 93).

c. between Type II and Type III institutions (none).

8. Professional Role

Of the two competencies found to differ significantly, no significant difference existed for instructors:

a. between Type I and Type II institutions (items 97, 99).

b. between Type I and Type III institutions (items 97, 99).

c. between Type II and Type III institutions (none).

9. Student Organizations

Of the three competencies found to differ significantly, no significant differences existed for instructors:

a. between Type I and Type II institutions (items 106, 107, 109).

b. between Type I and Type III institutions (none).

c. between Type II and Type III institutions (items 106, 109).

10. Coordination on-the-Job (CO-OP)

Of the two competencies found to differ significantly, no significant difference existed for instructors:

a. between Type I and Type II institutions (items 117, 118).

b. between Type II and Type III institutions (none).

c. between Type I and III insitutions (none).

H_2 Pedagogical inservice needs of part-time postsecondary instructors will be greater than pedagogical inservice needs of full-time postsecondary agriculture instructors.

A one-way analysis of variance procedure was used to determine if significant differences existed between part-time and full-time instructors at the 0.05 level of significance.

1. Of the ten competencies found to differ significantly, all ten were rated significantly higher by full-time than part-time instructors. H_2 was rejected at the 0.05 level for all ten competencies.

H_3 The types of inservice activities available to part-time and full-time postsecondary agriculture instructors will differ significantly among the types of institutions.

A low rate of response by instructors employed on a part-time basis required the researcher to use a one-way analysis of variance procedure to determine significant differences of all instructors by type of institution. Statistical significance was set at the 0.05 alpha level. Scheffe Multiple Range Test was used to identify differences between instructors at the three types of institutions.

1. Of the seven inservice activities found to differ significantly in availability at the institution, no significant difference existed for instructors:

   a. between Type I and Type II institutions (all 7).

   b. between Type I and Type III institutions (none).

   c. between Type II and Type III institutions (items 3, 18).

H_4 The types of inservice activities available to full-time postsecondary agriculture instructors will be significantly greater than the types of inservice activities available to part-time postsecondary agriculture instructors.

A one-way analysis of variance statistical procedure was used to determine if a significant difference existed between mean ratings of full-time and part-time postsecondary agriculture instructors. The alpha value of 0.05 was adopted as the critical level of statistical significance.

1. Of the seven inservice activities found to differ significantly in availability at the institution, all seven activities were rated higher by part-time instructors than full-time instructors. The hypothesis was rejected for all seven activities at the 0.05 alpha level.

Conclusions and Recommendations

1. Instructors in Type I and Type II institutions in the United States do not differ significantly in pedagogical needs for inservice education.
2. Instructors in Type I institutions in the United States differ significantly in pedagogical needs for inservice education compared to instructors in Type III institutions.
3. In the United States, instructors in Type II institutions differ significantly in pedagogical needs for inservice education from instructors in Type III institutions.
4. Specific to the sample population in the study, full-time instructors perceived a greater need for inservice education of pedagogical competencies than part-time instructors.

5. In the United States, instructors in Type III institutions have less inservice need for pedagogical competencies than instructors in Type I or Type II institutions.
6. Instructors in Type I and Type II institutions in the United States perceive their highest pedagogical inservice need to be "recruit students for the agricultural technology program."
7. Instructors in Type III institutions in the United States perceive their greatest pedagogical inservice need to be "teaching with the aid of a micro-computer."
8. In the sample population of this study, availability of inservice activities at the institution are perceived to be greater by part-time instructors than full-time instructors. However, a large percent of part-time instructors may not know the availability of inservice activities at their institutions.

Implications

The following implications are made as a result of this study, the review of literature, and represent the judgment of the writer.

It is implied that:

1. Teacher educators in agriculture and other professional organizations who intend to provide postsecondary agriculture instructors inservice education should consider the needs of instructors at institutions that award the associate degree or less to be different from instructors in four-year colleges and universities. Pedagogical competencies in the area of public and human relations should receive top priority. A need exists to provide instructors with strategies on how to recruit students into the agricultural technology program, regardless of institution type.

2. Administrators of institutions that offer postsecondary agriculture programs should develop practices that will help part-time agriculture instructors evaluate their own techniques and methods of teaching.
3. Supervisors of postsecondary agriculture instructors should make a greater effort to inform part-time instructors of the available inservice activities at the institution. Better communication appears needed between part-time and full-time agriculture instructors regarding available inservice activities.
4. The National Association of Colleges and Teachers of Agriculture and the American Association of Community and Junior Colleges should solicit postsecondary agriculture instructors to become members of their associations. Other professional organizations also may need to solicit postsecondary agriculture instructors as members of their organization. All organizations may need to offer more activities, including reports of research studies, teaching techniques, and update opportunities in technical agriculture areas, specific to needs of postsecondary agriculture instructors.

Recommendations for Further Study

In conducting this study and with experiences associated with completing a two-year agricultural technology program, the writer became aware of the need for further research in postsecondary agricultural education. The following are areas of needed research:

1. To determine the demand for future postsecondary agriculture instructors.

2. To determine the effectiveness and quality of present programs which are offered to prepare postsecondary agriculture instructors, as perceived by administrators and program graduates who are instructors.
3. To determine the skills needed by instructors to re- in and/or upgrade competencies in their technical area of agriculture.
4. To determine the availability and usefulness of teaching materials to instructors of agricultural technicians in each program area.
5. To identify the background characteristics of students who choose to enroll in terminal and transfer agriculture programs at community/junior/technical colleges.
6. To identify the technical skills and general education which graduates of two-year postsecondary agriculture programs should possess, as perceived by potential employers.
7. To determine the quality of similar postsecondary agricultural programs offered at different types of institutions, as perceived by past graduates of the programs and their employers.
8. To identify the occupational titles of jobs currently being accepted by graduates of agricultural technology programs.
9. To determine changes needed in curricula of agricultural technology programs to meet the needs of current changes in agricultural industry.
10. To identify transfer opportunities for graduates of both Associate degree terminal and transfer agriculture programs to institutions offering baccalaureate degree curricula in agriculture.

11. To identify if there exists a common philosophy of skills possessed between postsecondary agricultural technicians and vocational agriculture students at the secondary level.
12. To determine the status of the Associate of Applied Science degree awarded completers of agriculture technology programs, as perceived by employers of program graduates.

APPENDIX A

LETTERS OF CORRESPONDENCE

December 10, 1984

Faculty Member
Department of Agricultural &
Extension Education
The Pennsylvania State University
University Park, PA 16802

Dear Faculty Member:

I am conducting a research study as partial fulfillment of a Doctor of Philosophy degree in Agricultural Education. The title of my study is PEDAGOGICAL INSERVICE NEEDS OF TWO-YEAR POSTSECONDARY AGRICULTURE INSTRUCTORS IN THE UNITED STATES. The specific objectives of the study are:

1. To determine pedagogical inservice needs of part-time and full-time two-year postsecondary agriculture instructors by type of institution.

2. To determine the types of inservice activities available for part-time and full-time two-year postsecondary agriculture instructors by type of institution.

I need your assistance. The attached survey instrument is being developed to fulfill the objectives of the study. Please review the questionnaire and offer suggestions which you think will improve its effectiveness. Please return the completed questionnaire and your suggestions to me in Room 308, Armsby Building, The Pennsylvania State University on or before December 17, 1984.

Your cooperation and assistance will be greatly appreciated.

Sincerely yours,

Hobart L. Harmon
Graduate Student
Department of Agricultural &
Extension Education
The Pennsylvania State University

December 10, 1984

Graduate Student
Department of Agricultural &
Extension Education
The Pennsylvania State University
University Park, PA 16802

Dear Graduate Student:

I am conducting a research study as partial fulfillment of a Doctor of Philosophy degree in Agricultural Education. The title of my study is PEDAGOGICAL INSERVICE NEEDS OF TWO-YEAR POSTSECONDARY AGRICULTURE INSTRUCTORS IN THE UNITED STATES. The specific objectives of the study are:

1. To determine pedagogical inservice needs of part-time and full-time two-year postsecondary agriculture instructors by type of institution.

2. To determine the types of inservice activities available for part-time and full-time two-year postsecondary agriculture instructors by type of institution.

I need your assistance. The attached survey instrument is being developed to fulfill the objectives of the study. Please review the questionnaire and offer suggestions which you think will improve its effectiveness. Please return the completed questionnaire and your suggestions to me in Room 308, Armsby Building, The Pennsylvania State University on or before December 17, 1984.

Your cooperation and assistance will be greatly appreciated.

Sincerely yours,

Hobart L. Harmon
Graduate Student
Department of Agricultural &
Extension Education
The Pennsylvania State University

February 14, 1985

Dr. Larry L. Statler
Agriculture Department
Kirkwood Community College
P. O. Box 2068
Cedar Rapids, Iowa 52406

Dear Dr. Statler:

This letter is in response to our telephone conversation of February 12, in which I asked for your cooperation in a national study of postsecondary agriculture instructors in the United States. The primary purpose of the study is to determine the pedagogical inservice needs of postsecondary agriculture instructors. A secondary purpose is to determine the availability of inservice activities for instructors.

I appreciate your agreement to provide me with the names of all full-time and part-time postsecondary agriculture instructors at your institution. For purposes of the study, full- and part-time instructors are defined as follows:

Full-time instructor--a postsecondary agriculture instructor who is employed on a full-time basis and teaches more than nine contact hours per term.

Part-time instructor--a postsecondary agriculture instructor who is employed and paid on a term basis to teach up to nine contact hours per term and has taught at least one course in each of the last two academic years (1983-85 and 1984-85).

Please send the names to me in Room 308 Armsby Building, The Pennsylvania State University, University Park, PA 16802. All names of participates in the study will be kept confidential. The results of the study will be reported in group form only. Please let me know if you would like a copy of the results.

Again, THANK YOU for your help.

Sincerely,

Hobart L. Harmon
Research Assistant

February 14, 1985

Dr. Wayne Longbrake
Division Director
Natural Resources Management
The Williamsport Area Community College
1005 W. Third Street
Williamsport, PA 17701

Dear Dr. Longbrake:

This letter is in response to our telephone conversation of February 13, in which I asked for your cooperation in a national study of postsecondary agriculture instructors in the United States. The primary purpose of the study is to determine the pedagogical inservice needs of postsecondary agriculture instructors. A secondary purpose is to determine the availability of inservice activities for instructors.

I appreciate your agreement to provide me with the names of all full-time and part-time postsecondary agriculture instructors at your institution. For purposes of the study, full- and part-time instructors are defined as follows:

Full-time instructor--a postsecondary agriculture instructor who is employed on a full-time basis and teaches more than nine contact hours per term.

Part-time instructor--a postsecondary agriculture instructor who is employed and paid on a term basis to teach up to nine contact hours per term and has taught at least one course in each of the last two academic years (1983-85 and 1984-85).

Please send the names to me in Room 308 Armsby Building, The Pennsylvania State University, University Park, PA 16802. All names of participates in the study will be kept confidential. The results of the study will be reported in group form only. Please let me know if you would like a copy of the results.

Again, THANK YOU for your help.

Sincerely,

Hobart L. Harmon
Research Assistant

March 5, 1985

Ø

Dear Ø:

The technology of agriculture and the type of students enrolling in postsecondary agriculture programs are changing rapidly. Perhaps your needs as an instructor are also changing? I need your assistance to refine or polish a questionnaire for use in a national study of postsecondary agriculture instructors. The specific objectives of the study are:

1. To determine pedagogical inservice needs of part-time and full-time postsecondary agriculture instructors by type of institution.

2. To determine the types of inservice activities available for part-time and full-time postsecondary agriculture instructors by type of institution.

Please complete the enclosed questionnaire and return it to me in the stamped, self-addressed envelope on or before March 22, 1985. As you complete the questionnaire, please feel free to make comments concerning clarity or appropriateness of the items.

You can be assured that your responses will be held in strict confidence. The results of the study will be reported in group form only.

Your cooperation and assistance will be greatly appreciated.

Sincerely yours,

Hobart L. Harmon

HLH:dt
Enc.

March 27, 1985

Ð

Dear Ð:

The technology of agriculture and the type of students enrolling in postsecondary agriculture programs of less than the baccalaureate degree are changing rapidly. Perhaps the needs of instructors are also changing? I need your assistance to conduct a national study of postsecondary agriculture instructors. The specific objectives of the study are to determine pedagogical inservice needs and types of inservice activities available for part-time and full-time postsecondary agriculture instructors.

I selected a random sample of institutions that offer two-year postsecondary agriculture programs. Your institution was identified in the sample. Please send me the name and home address of each full-time and part-time postsecondary agriculture instructor at your institution. Be sure to include yourself if you are a postsecondary agriculture instructor. For purposes of the study, full- and part-time instructors are defined as follows:

> Full-time instructor--a postsecondary agriculture instructor who is employed on a full-time basis and teaches more than nine contact hours per term.
>
> Part-time instructor--a postsecondary agriculture instructor who is employed and paid on a term basis to teach up to nine contact hours per term and has taught at least one course in each of the last two academic years (1983-84 and 1984-85).

Your participation is extremely important to assure the sample is representative of all instructors in the U. S. Please send me the names of full- and part-time instructors, indentified separately, as soon as possible in the self-addressed stamped envelope. All names of participants in the study will be kept confidential. The results of the study will be reported in group form only. Thank you for your help in this important study.

Sincerely,

Hobart L. Harmon
Research Assistant

April 22, 1985

D

Dear D:

I have not received your response to my request of March 27 for assistance to conduct a national study of postsecondary agriculture instructors. The specific objectives of the study are to determine pedagogical inservice needs and types of inservice activities available for part-time and full-time postsecondary agriculture instructors.

Please send me the name and home address of each full-time and part-time postsecondary agriculture instructor at your institution on or before May 1. Also, please identify all full- and part-time instructors separately. Be sure to include yourself if you are a postsecondary agriculture instructor. For purposes of the study, full- and part-time instructors are defined as follows:

Full-time instructor--a postsecondary agriculture instructor who is employed on a full-time basis and teaches more than nine contact hours per term.

Part-time instructor--a postsecondary agriculture instructor who is employed and paid on a term basis to teach up to nine contact hours per term and has taught at least one course in each of the last two academic years (1983-84 and 1984-85).

Your participation is extremely important to assure the sample is representative of all instructors in the U. S. Please send me the names and addresses of instructors in the self-addressed stamped envelope on or before May 1. All names of participants in the study will be kept confidential. The results of the study will be reported in group form only. Thank you for your help in this important study.

Sincerely,

Hobart L. Harmon
Research Assistant

May 9, 1985

E

Dear E:

The technology of agriculture and the type of students enrolling in postsecondary agriculture programs of less than the baccalaureate degree are changing rapidly. Perhaps the needs of instructors are also changing? A national study of postsecondary agriculture instructors has not been conducted since 1971, almost 15 years ago. I need your assistance to conduct this national study.

The focus of this study is on the inservice needs and activities of postsecondary agriculture instructors (ag production, forestry, horticulture, etc.). Particular emphasis is placed on identifying needs which can be addressed through state and national conferences, industry-sponsored technical update sessions, and inservice activities available at your institution. Hopefully, your responses to the enclosed questionnaire will provide information for the design of a professional development handbook that will meet the needs of instructors like yourself throughout the United States.

Please give me about 15-20 minutes of your time to complete the enclosed questionnaire. Your participation is essential to assure the findings of the study are representative of instructors across the United States. Please complete the enclosed questionnaire and return it to me in the self-addressed, stamped envelope by May 23, 1985. You can be assured that your name will be held in strict confidence and not reported in the results of the study. Your responses on the questionnaire will be summarized and reported in group form only.

I appreciate you taking time to identify your instructional needs and available inservice activities. I look forward to receiving your completed questionnaire by the May 23 deadline.

This study is about you and for you! Thank you for your help.

Sincerely,

Hobart L. Harmon

HLH:dt
Enc.

May 23, 1985

Ð

Dear Ð:

Recently I mailed you a questionnaire pertaining to a study of the inservice needs and activities of full-time and part-time postsecondary agriculture instructors in the United States. Your participation in the study is essential to assure the findings are representative of all instructors. One possible use of the information is the development of an inservice handbook designed specifically to meet the needs of instructors like yourself.

Please take a few minutes of your time now to complete the questionnaire I mailed you approximately two weeks ago. Your name will be held in strict confidence as your responses on the questionnaire will be summarized and recoded in group form only. If you need another copy of the questionnaire, please contact me at the above address or call 814-863-0068 or 814-863-0443. The deadline for returning the questionnaire is May 31, 1985.

In the event you have already completed and returned the questionnaire, please disregard this letter and accept my thanks for helping conduct this important study.

Sincerely yours,

Hobart L. Harmon

HLH:dt

May 31, 1985

E

Dear E:

Recently I mailed you a questionnaire pertaining to a study of the inservice needs and activities of full-time and part-time postsecondary agriculture instructors in the United States. A national study of the instructors of students enrolled in postsecondary agriculture programs of less than the baccalaureate degree has not been conducted since 1971. Your participation in the study is essential to assure the findings are representative of all instructors. One possible use of the information is the development of an inservice handbook designed specifically to meet the needs of instructors like yourself.

Enclosed is another copy of the questionnaire. Please take a few minutes of your time now to complete it. Your name will be held in strict confidence as your responses on the questionnaire will be summarized and recorded in group form only. If you have questions about the questionnaire, please contact me at the above address or call 814-863-0068 or 814-863-0443. The deadline for returning the questionnaire is June 10, 1985.

Approximately 150 instructors have returned the questionnaire. I look forward to receiving your input in this study. In the event you have already completed and returned the first copy of the the questionnaire, please disregard this letter and accept my thanks for helping conduct this important study.

Sincerely yours,

Hobart L. Harmon

HLH:dt

APPENDIX B

FINAL QUESTIONNAIRE

PEDAGOGICAL INSERVICE NEEDS OF FULL-TIME AND PART-TIME POSTSECONDARY AGRICULTURE INSTRUCTORS IN THE UNITED STATES

Directions: Please answer each question. Where a line is provided, write your response. Where there are brackets ( ), mark an "X" to indicate your choice(s).

PART I: INSTITUTIONAL INFORMATION

1. Name of institution? _____

2. Type of academic system at institution?
   ( ) Semester ( ) Quarter ( ) Other (specify)_____

3. Is your institution affiliated with a land-grant university?
   ( ) Yes ( ) No

PART II: INSTRUCTOR CHARACTERISTICS

1. Sex? ( ) Male ( ) Female

2. Age? _____years

3. Employment status at institution? ( ) Full-Time ( ) Part-Time

4. Length of contract at institution?

   a. ( ) 9-month
   b. ( ) 10-month
   c. ( ) 11-month
   d. ( ) 12-month
   e. ( ) Other (specify)_____

5. What is your professional title?

   a. ( ) Instructor
   b. ( ) Assistant Professor
   c. ( ) Associate professor
   d. ( ) Professor
   e. ( ) Other (specify)_____

6. Number of years in present position? _____year(s)

7. Number of contact hours you have taught or will teach per week during each term of the 1984-85 academic year?

   If SEMESTER system: Fall 1984 _____ Spring 1985 _____

   If QUARTER system: Fall 1984 ___ Winter 1985 ___ Spring 1985 ___

   If _____ system: (specify)_____

8. Number of contact hours you taught per week during Summer 1984?
   _____hours/week

9. Instructional area in which you are assigned over 50 percent of your teaching responsibility?

a. ( ) Agribusiness
b. ( ) Agricultural Mechanics
c. ( ) Agronomy
d. ( ) Animal Health/Veterinary
e. ( ) Animal Science
f. ( ) Forestry
g. ( ) Horticulture
h. ( ) Wildlife and Fisheries
i. ( ) Other (specify)_____

10. Your highest educational degree held?

a. ( ) High school diploma or certificate
b. ( ) Associate degree
c. ( ) Bachelor's degree
d. ( ) Master's degree
e. ( ) Doctorate (specify)_____

11. Are you a graduate of an agricultural technology program?
( ) Yes ( ) No

12. Teaching experience in vocational agriculture at secondary level?
_____ year(s)

13. Teaching experience at secondary level other than vocational agriculture? _____year(s)

14. Teaching experience in agriculture at postsecondary level?
_____year(s)

15. Post-high school employment in business or industry related to instructional area? _____year(s)

16. Post-high school employment in business or industry non-related to instructional area? _____year(s)

17. College supervised teaching experience (e.g., student teaching)?
_____week(s)

18. Membership in professional organizations? (Mark all that apply)

a. ( ) National Association of Colleges and Teachers of Agriculture
b. ( ) American Association of Community and Junior Colleges
c. ( ) American Vocational Association
d. ( ) National Vocational Agricultural Teachers Association
e. ( ) State Vocational Agricultural Teachers Association
f. ( ) State association for postsecondary agriculture instructors
g. ( ) State association for community college instructors
h. ( ) Other (specify)_____

19. Do you think a national organization devoted only to postsecondary agriculture instructors is needed? ( ) Yes ( ) No

20. Would you join a professional organization devoted specifically to postsecondary agriculture instructors? ( ) Yes ( ) No

PART II: PEDAGOGICAL INSERVICE NEEDS

Directions: Listed below are competencies that are grouped into ten major categories. To the right of each competency, please indicate your need for inservice education for the competency.

The following rating scale is used for each competency:

1 = NOT NEEDED
2 = SOMEWHAT NEEDED
3 = NEEDED
4 = GREATLY NEEDED

Please respond to each item by CIRCLING the appropriate number to indicate YOUR NEED FOR INSERVICE EDUCATION.

Competency	Your Degree of Need
I. PLANNING FOR INSTRUCTION	
1. Select and develop instructional content for a course.....	1 2 3 4
2. Determine student needs or goals.....	1 2 3 4
3. Formulate lesson objectives.....	1 2 3 4
4. Make the instruction relevant to the established technician level positions.....	1 2 3 4
5. Select and utilize a variety of teaching techniques and methods.....	1 2 3 4
6. Determine in-school learning experiences (classroom or laboratory).....	1 2 3 4
7. Determine instructional media and aids.....	1 2 3 4
8. Develop instructional materials (information sheets, transparencies, etc.).....	1 2 3 4
9. Organize the sequence of learning tasks.....	1 2 3 4
10. Select tools and equipment.....	1 2 3 4
11. Establish the evaluative criteria for a lesson, unit or course.....	1 2 3 4
12. Construct a lesson plan.....	1 2 3 4

Scale: 1=NOT NEEDED, 2=SOMEWHAT NEEDED, 3=NEEDED, 4=GREATLY NEEDED

Competency	Your Degree of Need			
13. Determine the need and identify resource persons.....	1	2	3	4
14. Prepare course syllabus.....	1	2	3	4
II. TEACHING				
15. Motivate students to learn.....	1	2	3	4
16. Teach students to think critically and independently.....	1	2	3	4
17. Direct student laboratory experiences.....	1	2	3	4
18. Teach a concept or principle through a demonstration.....	1	2	3	4
19. Utilize principles of learning in daily instruction.....	1	2	3	4
20. Conduct a field trip.....	1	2	3	4
21. Select and utilize visual aids in teaching a lesson.....	1	2	3	4
22. Demonstrate a manipulative skill.....	1	2	3	4
23. Reinforce learning.....	1	2	3	4
24. Recognize, interpret, and utilize student actions and behavior (cues).....	1	2	3	4
25. Introduce a lesson.....	1	2	3	4
26. Direct a group discussion.....	1	2	3	4
27. Give an illustrated talk.....	1	2	3	4
28. Develop standards for student attainment.....	1	2	3	4
29. Direct a student demonstration.....	1	2	3	4
30. Direct individualized instruction.....	1	2	3	4
31. Suggest study techniques.....	1	2	3	4
32. Use oral questions to present information.....	1	2	3	4
33. Moderate a panel discussion.....	1	2	3	4

Scale: 1=NOT NEEDED, 2=SOMEWHAT NEEDED, 3=NEEDED, 4=GREATLY NEEDED

Competency	Your Degree of Need			
34. Teach with the aid of filmstrips, slides, and video tapes.....	1	2	3	4
35. Teach with the aid of audio tape or radio receiver resource.....	1	2	3	4
36. Teach with the aid of a micro-computer.....	1	2	3	4
37. Direct programmed instruction (teaching machine or text).....	1	2	3	4
III. EVALUATING INSTRUCTION				
38. Evaluate ones own techniques and methods of teaching.....	1	2	3	4
39. Evaluate text and reference materials to meet course objectives.....	1	2	3	4
40. Select appropriate measures to evaluate student learning.....	1	2	3	4
41. Devise laboratory performance tests.....	1	2	3	4
42. Formulate tests (essay, true/false, completion, matching).....	1	2	3	4
43. Formulate a system of grading consistent with school policy.....	1	2	3	4
44. Establish criteria for student self-evaluation.....	1	2	3	4
45. Devise and direct student self-evaluation.....	1	2	3	4
46. Interpret evaluation data for students.....	1	2	3	4
47. Devise case-study problems.....	1	2	3	4
48. Develop form for student evaluation of course...	1	2	3	4
IV. PROGRAM PLANNING				
49. Assist administrators in developing and maintaining agricultural program.....	1	2	3	4
50. Conduct adult or technical inservice agricultural programs.....	1	2	3	4

Scale: 1=NOT NEEDED, 2=SOMEWHAT NEEDED, 3=NEEDED, 4=GREATLY NEEDED

Competency	Your Degree of Need			
51. Utilize local and statewide policy in securing reimbursement for occupational programs.....	1	2	3	4
52. Select, utilize and maintain agricultural program advisory committee.....	1	2	3	4
53. Utilize local and statewide guidelines and needs assessments for program planning.....	1	2	3	4
54. Conduct and interpret a task (competency) or activity analysis of agricultural occupations.....	1	2	3	4
55. Conduct community surveys to plan programs.....	1	2	3	4
56. Develop and analyze agricultural program goals and objectives.....	1	2	3	4
57. Interpret the socio-economic and power structure of the community.....	1	2	3	4
58. Determine and develop facilities for the agricultural program.....	1	2	3	4

V. GUIDANCE AND COUNSELING

59. Up-date, revise, and improve curriculum based upon follow-up data.....	1	2	3	4
60. Maintain an "open door" policy regarding counseling.....	1	2	3	4
61. Provide students with resource materials on occupational opportunities in agriculture.....	1	2	3	4
62. Write recommendations for students for employment.....	1	2	3	4
63. Assist students with scholastic problems.....	1	2	3	4
64. Assist students with deficient educational backgrounds.....	1	2	3	4
65. Provide special training or assistance to students who are disadvantaged or handicapped .	1	2	3	4

Scale: 1=NOT NEEDED, 2=SOMEWHAT NEEDED, 3=NEEDED, 4=GREATLY NEEDED

Competency	Your Degree of Need			
66. Assist students with job-related problems.....	1	2	3	4
67. Assist students with personal and social problems.....	1	2	3	4
68. Conduct a counseling/advising session.....	1	2	3	4
69. Interpret cumulative student records.....	1	2	3	4
VI. MANAGEMENT				
70. Develop and implement safety procedures.....	1	2	3	4
71. Plan a budget for equipment and supplies (annual and projected).....	1	2	3	4
72. Write grant proposals to obtain funds for agricultural program.....	1	2	3	4
73. Develop and maintain occupational opportunity files.....	1	2	3	4
74. Record and file student data (grades, etc,)....	1	2	3	4
75. Establish rules and regulations for laboratory participation.....	1	2	3	4
76. Determine and prepare orders for short- and long-range supply needs.....	1	2	3	4
77. Develop policy for use of facilities and equipment.....	1	2	3	4
78. Prepare and file reports for referral purposes (recommendations).....	1	2	3	4
79. Arrange the mechanical details of the classroom and lab (light, heat, ventilation).....	1	2	3	4
80. Write and submit evaluation reports.....	1	2	3	4
81. Group students according to individual differences and needs.....	1	2	3	4
VII. PUBLIC AND HUMAN RELATIONS				
82. Develop good professional working relationships with school staff.....	1	2	3	4

Scale: 1=NOT NEEDED, 2=SOMEWHAT NEEDED, 3=NEEDED, 4=GREATLY NEEDED

Competencey	Your Degree of Need			
83. Interpret and promote technical education to the public.....	1	2	3	4
84. Recruit students for agricultural technology program...	1	2	3	4
85. Maintain a liaison with agricultural organiations and associations.....	1	2	3	4
86. Maintain a liaison with employment agencies....	1	2	3	4
87. Maintain a liaison with community organizations (professional, services, fraternal, social, religious).....	1	2	3	4
88. Inform community of new developments in technical agricultural education through radio, newspapers, and television.....	1	2	3	4
89. Prepare and disseminate brochures and other descriptive materials on technical education...	1	2	3	4
90. Cooperate and work with instructors in transfer education programs.....	1	2	3	4
91. Cooperate and work with adult education division.....	1	2	3	4
92. Articulate agricultural program with secondary schools.....	1	2	3	4
93. Articulate agricultural program with institutions that award the baccalaureate degree.....	1	2	3	4

XIII. PROFESSIONAL ROLE

94. Interpret the goals and objectives of agricultural education.....		2	3	4
95. Interpret the philosophy and goals of the institution.....	1	2	3	4
96. Interpret the legal responsibilities and liabilities of an instructor.....	1	2	3	4
97. Keep abreast of service field by reading and exchanging literature.....	1	2	3	4

Scale: 1=NOT NEEDED, 2=SOMEWHAT NEEDED, 3=NEEDED, 4=GREATLY NEEDED

Competency	Your Degree of Need			
98. Use information in professional journals for professional development and improvement of instruction.....	1	2	3	4
99. Engage in a planned personal program of continuing professional education.....	1	2	3	4
100. Participate in professional organizations related to educational and technical agriculture areas.....	1	2	3	4
101 Contribute to professional literature.....	1	2	3	4
102. Participate in research studies.....	1	2	3	4
IX. STUDENT ORGANIZATIONS				
103. Develop creative and initiative attributes within students.....	1	2	3	4
104. Promote interest in, and assist in establishing a student organization.....	1	2	3	4
105. Assist in the development of an annual program of activities.....	1	2	3	4
106. Organize school and community support for a student organization.....	1	2	3	4
107. Conduct leadership development programs for organizational officers.....	1	2	3	4
108. Assist in the development of a constitution and by-laws of the organization.....	1	2	3	4
109. Maintain a student organization as an integral part of instruction.....	1	2	3	4
110. Organize competitive education activities.....	1	2	3	4
X. COORDINATION-ON-THE-JOB (CO-OP)				
111. Secure on-the-job training stations for students.....	1	2	3	4
112. Develop on-the-job training plans for students.....	1	2	3	4

Scale: 1=NOT NEEDED, 2=SOMEWHAT NEEDED, 3=NEEDED, 4=GREATLY NEEDED

Competency	Your Degree of Need			
113. Supervise students while placed on-the-job.....	1	2	3	4
114. Plan and coordinate on-the-job experience programs.....	1	2	3	4
115. Evaluate on-the-job experience programs and experience centers.....	1	2	3	4
116. Evaluate objectively student performance on-the-job.....	1	2	3	4
117. Conduct a training station development program.....	1	2	3	4
118. Select on-the-job training centers.....	1	2	3	4

PART III: INSERVICE ACTIVITIES

Directions: Listed below are inservice activities which might be used to obtain needed pedagogical competencies. Please rate the availability of each activity at your institution.

The following scale is used for each activity:

1 = VIRTUALLY NEVER AVAILABLE
2 = SELDOM AVAILABLE
3 = USUALLY AVAILABLE
4 = ALMOST ALWAYS AVAILABLE

Please respond to each activity by CIRCLING the appropriate number or "Don't Know."

Activity	Availability				
1. Faculty orientation program.....	1	2	3	4	Don't Know
2. All-day program for full-time faculty....	1	2	3	4	Don't Know
3. Day or evening program for part-time faculty.....	1	2	3	4	Don't Know
4. Single-session workshops (teaching strategies).....	1	2	3	4	Don't Know

Scale: 1=VIRTUALLY NEVER AVAILABLE, 2=SELDOM AVAILABLE, 3=USUALLY AVAILABLE, 4=ALMOST ALWAYS AVAILABLE

5. Multi-session workshops/seminars.....	1	2	3	4	Don't Know
6. Individual informal consultations.....	1	2	3	4	Dont' Know
7. Formal growth contracts (individual development plan).....	1	2	3	4	Don't Know
8. Apprenticeships/model teacher programs...	1	2	3	4	Don't Know
9. Personal interest/enrichment sessions (hobbies, travels).....	1	2	3	4	Don't Know
10. Sabbatical leaves.....	1	2	3	4	Don't Know
11. Summer institutes.....	1	2	3	4	Don't Know
12. Faculty exchange programs.....	1	2	3	4	Don't Know
13. Industry exchange programs.....	1	2	3	4	Don't Know
14. Retreats.....	1	2	3	4	Don't Know
15. Financial support for graduate study.....	1	2	3	4	Don't Know
16. Funding for attendance at professional meetings.....	1	2	3	4	Don't Know
17. Visit to other campuses.....	1	2	3	4	Don't Know
18. Institutional grants for instructional projects.....	1	2	3	4	Don't Know
19. Released time to develop instructional materials.....	1	2	3	4	Don't Know

THANK YOU!

Please return to:

Hobart L. Harmon
308 Armsby Building
Department of Agricultural & Extension Education
The Pennsylvania State University
University Park, PA 16802

APPENDIX C

TABLES C-1, C-2

Table C-1. Postsecondary Agriculture Instructors' Pedagogical Inservice Needs Ratings by Type of Institution.

Competency Items by Area	Institution Type								
	I[a]			II[b]			III[c]		
	n	Mean	S.D.	n	Mean	S.D.	n	Mean	S.D.
Area I--Planning for Instruction (14 items)									
1 Select and develop intructional content for a course	59	2.32	.96	136	2.50[d]	1.10	105	1.93	.97
2 Determine student needs or goals	59	2.36	.94	136	2.34	.97	104	2.14	.95
3 Formulate lesson objectives	59	2.20	.89	136	2.02	.92	105	1.77	.84
4 Make the instruction relevant to the established technician level position	59	2.46	.93	136	2.45	1.03	102	2.01	.98
5 Select and utilize a variety of teaching techniques and methods	59	2.75[d]	.86	136	2.41	.95	105	2.40	.93
6 Determine in-school learning experiences (classroom or laboratory)	58	2.28	.83	134	2.33	.99	102	2.06	.93
7 Determine instructional media and aids	59	2.31	.79	136	2.27	.99	103	2.10	.90
8 Develop intructional materials (information sheets, transparencies, etc.)	59	2.59[d]	.91	136	2.35	1.02	104	2.18	1.00
9 Organize the sequence of learning tasks	59	2.34	.86	135	2.07	.99	104	1.90	.93
10 Select tools and equipment	59	2.10	.90	136	1.86	.93	105	1.68	.83
11 Establish the evaluative criteria for a lesson, unit or course	59	2.22	.81	136	2.07	.97	103	1.85	.89

Table C-1. Continued.

Competency Items by Area	Institution Type								
	I[a]			II[b]			III[c]		
	n	Mean	S.D.	n	Mean	S.D.	n	Mean	S.D.
12 Contruct a lesson plan	59	2.00	.93	136	1.73	.93	104	1.64	.88
13 Determine the need and identify resource persons	58	2.35	.83	132	2.17	.89	103	1.79	.81
14 Prepare course syllabus	58	2.02	.78	133	2.07	1.04	102	1.67	.86
Area II--Teaching (23 items)									
15 Motivate students to learn	58	2.74[d]	1.05	134	2.73[d]	.98	103	2.51[d]	1.04
16 Teach students to think critically and independently	58	2.79[d]	1.01	134	2.84[d]	.94	103	2.59[d]	1.04
17 Direct student laboratory experiences	58	2.33	.96	134	2.13	1.94	103	1.96	1.00
18 Teach a concept or principle through a demonstration	58	2.22	.90	134	2.11	1.01	103	1.86	.92
19 Utilize principles of learning in daily instruction	58	2.40	.90	134	2.10	.91	100	1.96	.90
20 Conduct a field trip	58	2.00	1.03	134	1.77	.93	103	1.59	.81
21 Select and utilize visual aids in teaching a lesson	58	2.26	.97	133	2.11	.98	103	1.88	.87
22 Demonstrate a manipulative skill	58	2.17	.98	133	2.02	.98	102	1.62	.75
23 Reinforce learning	58	2.29	.94	132	2.17	.92	102	2.12	.94

Table C-1. Continued.

Competency Items by Area	Institution Type								
	I[a]			II[b]			III[c]		
	n	Mean	S.D.	n	Mean	S.D.	n	Mean	S.D.
24 Recognize, interpret, and utilize student actions and behavior (cues)	58	2.60[d]	.86	133	2.56[d]	.92	102	2.21	.94
25 Introduce a lesson	58	2.09	.88	133	1.90	.94	103	1.63	.78
26 Direct a group discussion	58	2.19	.89	134	1.99	.97	103	1.93	.97
27 Give an illustrated talk	58	2.16	.91	134	1.88	.95	103	1.71	.84
28 Develop standards for student attainment	58	2.41	.82	134	2.28	.93	103	1.97	.80
29 Direct a student demonstration	58	2.05	.78	134	2.04	.87	102	1.75	.78
30 Direct individualized instruction	58	2.40	.99	134	2.02	.93	103	1.85	.89
31 Suggest study techniques	58	2.41	.84	134	2.19	.97	103	2.07	.94
32 Use oral questions to present information	57	2.32	.99	134	2.07	.94	103	1.88	.90
33 Moderate a panel discussion	57	2.07	.78	134	2.01	.94	103	1.74	.83
34 Teach with the aid of filmstrips, slides, and video tapes	58	2.02	.91	134	1.98	1.02	103	1.88	.88
35 Teach with the aid of audio tape or radio receiver resource	58	2.10	.81	134	1.95	.90	103	1.82	.78
36 Teach with the aid of a micro-computer	58	2.79[d]	1.09	133	2.53[d]	1.03	102	2.81[d]	1.07

Table C-1. Continued.

Competency Items by Area	Institution Type								
	I[a]			II[b]			III[c]		
	n	Mean	S.D.	n	Mean	S.D.	n	Mean	S.D.
37 Direct programmed intruction (teaching machine or text)	58	2.33	.83	133	1.99	.91	100	1.89	.93
Area III--Evaluating Instruction (11 items)									
38 Evaluate ones own technique and methods of teaching	58	2.55[d]	.88	134	2.63[d]	.93	103	2.49	.90
39 Evaluate text and reference materials to meet course objectives	58	2.50[d]	.78	134	2.46	.95	103	2.19	.96
40 Select appropriate measures to evaluate student learning	58	2.50[d]	.82	134	2.41	.94	103	2.25	.89
41 Devise laboratory performance tests	58	2.26	.91	134	2.25	.97	103	2.06	.88
42 Formulate tests (essay, true/false, completion, matching)	58	2.28	.91	134	2.05	1.02	102	2.11	1.06
43 Formulate a system of grading consistent with school policy	58	2.07	.88	134	1.95	1.02	102	1.79	.88
44 Establish criteria for student self-evaluation	58	2.43	.88	134	2.34	.97	101	2.16	.89
45 Devise and direct student self-evaluation	58	2.33	.89	134	2.29	.95	102	2.07	.87
46 Interpret evaluation data for students	58	2.28	.89	133	2.19	.88	100	2.03	.85

Table C-1. Continued.

Competency Items by Area	Institution Type								
	I[a]			II[b]			III[c]		
	n	Mean	S.D.	n	Mean	S.D.	n	Mean	S.D.
47 Devise case-study problems	58	2.35	.89	134	2.18	.96	101	2.09	.98
48 Develop form for student evaluation of course	58	2.28	.87	134	2.08	.99	102	2.00	.89
Area IV--Program Planning (10 items)									
49 Assist administrators in developing and maintaining agricultural program	58	2.60[d]	.97	134	2.75[d]	1.07	98	2.43	1.12
50 Conduct adult or technical inservice agricultural programs	58	2.59[d]	.84	133	2.66[d]	1.04	99	2.07	.99
51 Utilize local and statewide policy in securing reimbursement for occupational programs	57	2.54[d]	.85	135	2.57[d]	1.03	99	2.12	1.05
52 Select, utilize and maintain agricultural program advisory committee	58	2.17	.88	136	2.42	1.10	101	2.01	.90
53 Utilize local and statewide guidelines and needs assessments for program planning	58	2.12	.77	135	2.32	1.02	100	1.96	.89
54 Conduct and interpret a task (competency) or activity analysis of agricultural occupations	57	2.18	.85	136	2.21	1.06	101	2.02	.95
55 Conduct community surveys to plan programs	57	2.30	.82	136	2.31	1.07	102	1.86	.92

Table C-1. Continued.

Competency Items by Area	Institution Type								
	I[a]			II[b]			III[c]		
	n	Mean	S.D.	n	Mean	S.D.	n	Mean	S.D.
56 Develop and analyze agricultural program goals and objectives	58	2.36	.77	136	2.35	1.04	101	2.19	.98
57 Interpret the socio-economic and power structure of the community	57	2.16	.90	136	2.16	1.03	101	1.86	.92
58 Determine and develop facilities for the agricultural program	58	2.28	1.07	136	2.43	1.11	99	2.09	.99
Area V--Guidance and Counseling (11 items)									
59 Up-date, revise, and improve curriculum based upon follow-up data	58	2.59[d]	.88	135	2.42	.94	99	2.29	.96
60 Maintain an "open door" policy regarding counseling	58	2.48	.10	134	2.16	1.01	101	1.98	1.09
61 Provide students with resource materials on occupational opportunities in agriculture	58	2.36	.99	135	2.44	.97	102	2.39	1.04
62 Write recommendations for students for employment	58	2.14	.95	135	2.15	.93	102	2.10	.98
63 Assist students with scholastic problems	58	2.33	.94	135	2.16	.94	102	2.22	.99
64 Assist students with deficient educational backgrounds	58	2.40	1.00	135	2.53[d]	1.01	102	2.31	.92

Table C-1. Continued.

Competency Items by Area	Institution Type								
	I[a]			II[b]			III[c]		
	n	Mean	S.D.	n	Mean	S.D.	n	Mean	S.D.
65 Provide special training or assistance to students who are disadvantaged or handicapped	57	2.16	.96	135	2.43	.99	100	2.23	.96
66 Assist students with job-related problems	58	2.47	.90	136	2.22	.99	100	2.04	.85
67 Assist students with personal and social problems	57	2.25	.87	136	2.22	.95	100	2.04	.86
68 Conduct a counseling/advising session	57	2.33	.89	135	2.17	.96	101	1.96	.89
69 Interpret cumulative student records	57	2.09	.85	136	2.03	.89	102	1.85	.88
Area VI--Management (12 items)									
70 Develop and implement safety procedures	58	2.35	1.04	136	2.26	1.04	100	1.90	.97
71 Plan a budget for equipment and supplies (annual and projected)	58	2.07	.88	135	2.33	1.08	100	1.9[illegible]	.97
72 Write grant proposals to obtain funds for agricultural programs	58	2.60[d]	1.14	136	2.83[d]	1.08	101	2.67[d]	1.12
73 Develop and maintain occupational opportunity files	56	2.16	.95	136	2.41	1.03	101	2.07	.95
74 Record and file student data (grades, etc.)	57	2.02	.94	135	2.04	1.06	102	1.72	.88

Table C-1. Continued.

Competency Items by Area	Institution Type								
	I[a]			II[b]			III[c]		
	n	Mean	S.D.	n	Mean	S.D.	n	Mean	S.D.
75 Establish rules and regulations for laboratory participation	57	2.05	.81	135	2.09	1.04	100	1.72	.88
76 Determine and prepare orders for short- and long-range supply needs	57	2.18	.87	136	2.19	.99	100	1.78	.94
77 Develop policy for use of facilities and equipment	57	2.21	.88	136	2.18	1.01	101	1.84	.92
78 Prepare and file reports for referral purposes (recommendations)	56	2.07	.78	135	1.95	.92	100	1.69	.80
79 Arrange the mechanical details of the classroom and lab (light, heat, ventilation)	58	1.85	.81	135	1.77	.89	100	1.65	.91
80 Write and submit evaluation reports	57	1.91	.81	135	1.90	.90	100	1.70	.81
81 Group students according to individual differences and needs	57	2.00	.82	134	1.90	.94	100	1.65	.85
Area VII--Public and Human Relations (12 items)									
82 Develop good professional working relationships with school staff	57	2.23	1.02	136	2.30	1.08	101	1.95	1.05
83 Interpret and promote technical education to the public	57	2.67[d]	.95	135	2.72[d]	1.03	102	2.39	1.01

Table C-1. Continued.

Competency Items by Area	Institution Type								
	I[a]			II[b]			III[c]		
	n	Mean	S.D.	n	Mean	S.D.	n	Mean	S.D.
84 Recruit students for agricultural technology program	56	2.96[d]	1.10	135	3.19[d]	1.07	100	2.73[d]	1.09
85 Maintain a liaison with agricultural organizations and associations	56	2.73[d]	1.00	135	2.64[d]	1.09	1.02	2.41	1.03
86 Maintain a liaison with employment agencies	56	2.52[d]	.93	135	2.59[d]	1.06	101	2.47	.98
87 Maintain a liaison with community organizations (professional, services, fraternal, social, religious)	57	2.42	.96	135	2.49	1.03	100	2.02	.86
88 Inform community of new developments in technical agricultural education through radio, newspapers, and television	56	2.71[d]	.99	135	2.82[d]	1.05	102	2.35	.98
89 Prepare and disseminate brochures and other descriptive materials on technical education	57	2.44	.95	134	2.76[d]	1.04	101	2.25	1.00
90 Cooperate and work with instructors in transfer education programs	56	2.16	.95	135	2.51[d]	1.04	98	2.02	.93
91 Cooperate and work with adult education division	56	2.30	.99	134	2.42	1.01	98	1.91	.89

Table C-1. Continued.

Competency Items by Area	Institution Type								
	I[a]			II[b]			III[c]		
	n	Mean	S.D.	n	Mean	S.D.	n	Mean	S.D.
92 Articulate agricultural program with secondary schools	55	2.66[d]	1.09	132	2.74[d]	1.03	99	2.40	1.02
93 Articulate agricultural program with institutions that award the baccalaureate degree	56	2.46	1.01	134	2.75	1.09	99	2.13	1.10
Area VIII--Professional Role (9 items)									
94 Interpret the goals and objectives of agricultural education	56	2.32	.88	134	2.22	.98	102	2.03	.90
95 Interpret the philosophy and goals of the institution	57	2.18	.91	134	2.13	1.01	102	1.97	.91
96 Interpret the legal responsibilities and liabilities of an instructor	57	2.60[d]	1.05	134	2.53[d]	1.01	102	2.28	1.03
97 Keep abreast of service field by reading and exchanging literature	56	2.50[d]	.97	134	2.68[d]	1.02	101	2.33	1.07
98 Use information in professional journals for professional development and improvement of instruction	55	2.33	.90	133	2.47	1.03	102	2.19	1.02
99 Engage in a planned personal program of continuing professional education	55	2.38	.89	134	2.55	1.03	102	2.21	.96

Table C-1. Continued.

Competency Items by Area	Institution Type								
	I[a]			II[b]			III[c]		
	n	Mean	S.D.	n	Mean	S.D.	n	Mean	S.D.
100 Participate in professional organizations related to educational and technical agriculture areas	54	2.35	.89	134	2.43	1.09	102	2.11	1.07
101 Contribute to professional literature	54	2.46	.82	133	2.23	.92	102	2.35	1.08
102 Participate in research studies	56	2.05	.88	134	2.10	.92	102	2.28	1.05
Area IX--Student Organizations (8 items)									
103 Develop creative and initiative attributes within students	56	2.57[d]	1.01	134	2.55[d]	.96	101	2.35	1.01
104 Promote interest in, and assist in establishing a student organization	57	2.35	.99	134	2.30	.99	102	2.17	1.00
105 Assist in the development of an annual program of activities	57	2.25	.93	134	2.30	1.00	102	1.99	.94
106 Organize school and community support for a student organization	57	2.35	.97	134	2.25	1.05	101	1.95	.85
107 Conduct leadership development programs for organizational officers	57	2.37	.98	133	2.25	1.00	102	1.93	.89
108 Assist in the development of a constitution and by-laws of the organization	57	2.07	.90	133	1.94	.92	102	1.77	.84

Table C-1. Continued.

Competency Items by Area	Institution Type								
	I[a]			II[b]			III[c]		
	n	Mean	S.D.	n	Mean	S.D.	n	Mean	S.D.
109 Maintain a student organization as an integral part of instruction	57	2.33	1.06	134	2.19	1.06	102	1.89	.94
110 Organize competitive education activities	56	2.29	.97	134	2.16	1.06	101	1.99	1.00
Area X--Coordination on-the-Job (CO-OP) (8 items)									
111 Secure on-the-job training stations for students	56	2.59[d]	1.14	134	2.58[d]	1.10	102	2.26	1.08
112 Develop on-the-job training plans for students	56	2.64[d]	1.12	134	2.58[d]	1.10	102	2.31	1.11
113 Supervise students while placed on-the-job	57	2.40	1.00	136	2.42	1.15	102	2.08	1.02
114 Plan and coordinate on-the-job experience programs	57	2.44	1.05	136	2.46	1.10	102	2.14	1.05
115 Evaluate on-the-job experience programs and experience centers	57	2.42	1.02	136	2.42	1.14	101	2.09	1.01
116 Evaluate objectively student performance on-the-job	57	2.54[d]	.98	136	2.41	1.14	102	2.21	1.04
117 Conduct a training station development program	57	2.37	1.01	136	2.37	1.13	99	1.91	.97

Table C-1. Continued.

Competency Items by Area	Institution Type								
	I[a]			II[b]			III[c]		
	n	Mean	S.D.	n	Mean	S.D.	n	Mean	S.D.
118 Select on-the-job training centers	56	2.45	.93	136	2.40	1.13	100	1.91	.99

[a]Type I institution offers postsecondary agriculture programs but awards less than the Associate degree.

[b]Type II institution offers postsecndary agriculture programs but awards the Associate degree as the highest degree.

[c]Type III institution offers postsecondary agriculture programs and awards, in addition to the Associate degree, Baccalaureate or higher degrees.

[d]Designates items which received a mean rating of 2.50 or higher.

Note: Scale for inservice needs was 1=not needed, 2=somewhat needed, 3=needed, 4=greatly needed.

Table C-2. Full-Time and Part-Time Postsecondary Agriculture Instructors' Pedagogical Inservice Needs Ratings.

Competency Items by Area	Instructor Employment Status					
	Full-Time			Part-Time		
	n	Mean	S.D.	n	Mean	S.D.
Area I--Planning for Instruction (14 items)						
1 Select and develop intructional content for a course	267	2.16	1.00	31	2.07	.93
2 Determine student needs or goals	266	2.27	.99	31	2.23	.62
3 Formulate lesson objectives	267	1.94	.90	31	2.13	.76
4 Make the instruction relevant to the established technician level position	264	2.30	1.03	31	2.23	.85
5 Select and utilize a variety of teaching techniques and methods	267	2.49	.94	31	2.29	.92
6 Determine in-school learning experiences (classroom or laboratory)	261	2.23	.95	31	2.13	.85
7 Determine instructional media and aids	136	2.27	.99	103	2.10	.90
8 Develop intructional materials (information sheets, transparences, etc.)	266	2.36	1.00	31	2.13	.96
9 Organize the sequence of learning tasks	265	2.08	.97	31	1.87	.76
10 Select tools and equipment	267	1.84	.90	31	1.81	.83
11 Establish the evaluative criteria for a lesson, unit or course	265	2.05	.93	31	1.84	.82

Table C-2. Continued.

Competency Items by Area	Instructor Employment Status					
	Full-Time			Part-Time		
	n	Mean	S.D.	n	Mean	S.D.
12 Contruct a lesson plan	266	1.74	.93	31	1.74	.77
13 Determine the need and identify resource persons	261	2.07	.89	30	2.00	.79
14 Prepare course syllabus	261	1.91	.96	30	1.93	.74
Area II--Teaching (23 items)						
15 Motivate students to learn	263	2.71[a]	1.03	30	2.13	.73
16 Teach students to think critically and independently	263	2.80[a]	1.00	30	2.27	.83
17 Direct student laboratory experiences	263	2.11	.97	30	2.03	.93
18 Teach a concept or principle through a demonstration	263	2.07	.97	30	1.77	.82
19 Utilize principles of learning in daily instruction	259	2.10	.93	30	2.13	.73
20 Conduct a field trip	263	1.73	.91	30	1.90	.92
21 Select and utilize visual aids in teaching a lesson	262	1.08	.94	30	1.87	.94
22 Demonstrate a manipulative skill	261	1.91	.93	30	1.80	.85
23 Reinforce learning	260	2.20	.93	30	1.97	.89
24 Recognize, interpret, and utilize student actions and behavior (cues)	261	2.48	.93	30	2.07	.87

Table C-2. Continued.

Competency Items by Area	Instructor Employment Status					
	Full-Time			Part-Time		
	n	Mean	S.D.	n	Mean	S.D.
25 Introduce a lesson	262	1.82	.89	30	1.93	.79
26 Direct a group discussion	263	2.02	.96	30	1.90	.89
27 Give an illustrated talk	263	1.87	.91	30	1.87	.90
28 Develop standards for student attainment	263	2.19	.88	30	2.23	.83
29 Direct a student demonstration	262	1.93	.83	30	1.97	.89
30 Direct individualized instruction	263	2.03	.96	30	2.00	.87
31 Suggest study techniques	263	2.19	.96	30	2.17	.83
32 Use oral questions to present information	262	2.07	.96	30	1.87	.73
33 Moderate a panel discussion	262	1.94	.89	30	1.73	.74
34 Teach with the aid of filmstrips, slides, and video tapes	263	1.94	.94	30	2.00	.95
35 Teach with the aid of audio tape or radio receiver resource	263	1.93	.95	30	1.90	.85
36 Teach with the aid of a micro-computer	261	2.69[a]	1.07	30	2.57[a]	1.04
37 Direct programmed intruction (teaching machine or text)	259	2.03	.93	30	1.93	.79

Table C-2. Continued.

Competency Items by Area	Instructor Employment Status					
	Full-Time			Part-Time		
	n	Mean	S.D.	n	Mean	S.D.
Area III--Evaluating Instruction (11 items)						
38 Evaluate ones own technique and methods of teaching	263	2.56[a]	.92	30	2.57[a]	.82
39 Evaluate text and reference materials to meet course objectives	263	2.39	.93	30	2.17	.91
40 Select appropriate measures to evaluate student learning	263	2.38	.93	30	2.27	.69
41 Devise laboratory performance tests	263	2.19	.95	30	2.10	.80
42 Formulate tests (essay, true/false, completion, matching)	262	2.11	1.03	30	2.13	.90
43 Formulate a system of grading consistent with school policy	262	1.91	.97	30	1.93	.79
44 Establish criteria for student self-evaluation	261	2.31	.94	30	2.12	.82
45 Devise and direct student self-evaluation	262	2.23	.93	30	2.13	.78
46 Interpret evaluation data for students	259	2.15	.88	30	2.13	.82
47 Devise case-study problems	261	2.18	.96	30	2.20	.96
48 Develop form for student evaluation of course	262	2.08	.95	30	2.17	.83

Table C-?. Continued.

Competency Items by Area	Instructor Employment Status					
	Full-Time			Part-Time		
	n	Mean	S.D.	n	Mean	S.D.
Area IV--Program Planning (10 items)						
49 Assist administrators in developing and maintaining agricultural program	258	2.63[a]	1.06	30	2.40	1.16
50 Conduct adult or technical inservice agricultural programs	259	2.46	1.02	29	2.31	1.00
51 Utilize local and statewide policy in securing reimbursement for occupational programs	258	2.43	1.02	31	2.23	1.06
52 Select, utilize and maintain agricultural program advisory committee	262	2.24	1.01	31	2.13	.99
53 Utilize local and statewide guidelines and needs assessments for program planning	260	2.17	.95	31	2.07	.93
54 Conduct and interpret a task (competency) or activity analysis of agricultural occupations	261	2.14	.99	31	2.16	.97
55 Conduct community surveys to plan programs	262	2.16	1.00	31	2.10	.98
56 Develop and analyze agricultural program goals and objectives	262	2.32	.97	31	2.07	.9?
57 Interpret the socio-economic and power structure of the community	261	2.08	.98	31	1.87	.92
58 Determine and develop facilities for the agricultural program	260	2.30	1.07	31	2.16	1.10

Table C-2. Continued.

Competency Items by Area	Instructor Employment Status					
	Full-Time			Part-Time		
	n	Mean	S.D.	n	Mean	S.D.
Area V--Guidance and Counseling (11 items)						
59 Up-date, revise, and improve curriculum based upon follow-up data	259	2.43	.95	31	2.16	.82
60 Maintain an "open door" policy regarding counseling	261	2.19	1.07	30	1.90	.80
61 Provide students with resource materials an occupational opportunities in agriculture	262	2.42	1.01	31	2.29	.94
62 Write recommendations for students for employment	262	2.13	.97	31	2.10	.79
63 Assist students with scholastic problems	262	2.24	.98	31	1.97	.75
64 Assist students with deficient educational backgrounds	262	2.46	.99	31	2.13	.81
65 Provide special training or assistance to students who are disadvantaged or handicapped	259	2.34	1.00	31	2.07	.81
66 Assist students with job-related problems	261	2.26	.94	31	1.77	.76
67 Assist students with personal and social problems	260	2.22	.91	31	1.68	.70
68 Conduct a counseling/advising session	260	2.17	.93	31	1.84	.86
69 Interpret cumulative student records	262	2.00	.89	31	1.77	.85

Table C-2. Continued.

Competency Items by Area	Instructor Employment Status					
	Full-Time			Part-Time		
	n	Mean	S.D.	n	Mean	S.D.
Area VI--Management (12 items)						
70 Develop and implement safety procedures	261	2.16	1.04	31	2.07	.93
71 Plan a budget for equipment and supplies (annual and projected)	260	2.16	1.02	31	2.03	.95
72 Write grant proposals to obtain funds for agricultural programs	262	2.76[a]	1.11	31	2.45	1.13
73 Develop and maintain occupational opportunity files	260	2.26	.96	31	2.10	1.04
74 Record and file student data (grades, etc.)	261	1.92	1.01	31	1.94	.81
75 Establish rules and regulations for laboratory participation	259	1.95	.98	31	2.00	.82
76 Determine and prepare orders for short- and long-range supply needs	260	2.04	.98	31	2.07	.85
77 Develop policy for use of facilities and equipment	261	2.07	.98	31	2.07	.89
78 Prepare and file reports for referral purposes (recommendations)	258	1.88	.88	31	1.87	.76
79 Arrange the mechanical details of the classroom and lab (light, heat, ventilation)	260	1.75	.90	31	1.71	.74
80 Write and submit evaluation reports	259	1.86	.88	31	1.61	.62

Table C-2. Continued.

Competency Items by Area	Instructor Employment Status					
	Full-Time			Part-Time		
	n	Mean	S.D.	n	Mean	S.D.
81 Group students according to individual differences and needs	258	1.86	.92	31	1.55	.62
Area VII--Public and Human Relations (12 items)						
82 Develop good professional working relationships with school staff	261	2.18	1.09	31	2.00	.89
83 Interpret and promote technical education to the public	261	2.61[a]	1.02	31	2.52[a]	1.03
84 Recruit students for agricultural technology program	258	3.05[a]	1.09	31	2.42	1.09
85 Maintain a liaison with agricultural organizations and associations	260	2.61[a]	1.06	31	2.39	1.05
86 Maintain a liaison with employment agencies	259	2.57[a]	1.01	31	2.26	.97
87 Maintain a liaison with community organizations (professional, services, fraternal, social, religious)	259	2.33	.98	31	2.16	1.00
88 Inform community of new developments in technical agricultural education through radio, newspapers, and television	260	2.66[a]	1.02	31	2.42	1.15
89 Prepare and disseminate brochures and other descriptive materials on technical education	259	2.54[a]	1.04	31	2.36	1.01
90 Cooperate and work with instructors in transfer education programs	256	2.31	1.02	31	2.00	.86

Table C-2. Continued.

Competency Items by Area	Instructor Employment Status					
	Full-Time			Part-Time		
	n	Mean	S.D.	n	Mean	S.D.
91 Cooperate and work with adult education division	255	2.25	1.00	31	1.97	.91
92 Articulate agricultural program with secondary schools	253	2.66[a]	1.04	31	2.19	1.01
93 Articulate agricultural program with institutions that award the baccalaureate degree	256	2.55[a]	1.12	31	1.97	.88
Area VIII--Professional Role (9 items)						
94 Interpret the goals and objectives of agricultural education	259	2.19	.95	31	2.00	.78
95 Interpret the philosophy and goals of the institution	260	2.09	.98	31	2.03	.80
96 Interpret the legal responsibilities and liabilities of an instructor	260	2.48	1.05	31	2.26	.89
97 Keep abreast of service field by reading and exchanging literature	258	2.56[a]	1.04	31	2.16	.93
98 Use information in professional journals for professional development and improvement of instruction	257	2.37	1.02	31	2.13	.92
99 Engage in a planned personal program of continuing professional education	258	2.41	1.01	31	2.26	.86
100 Participate in professional organizations related to educational and technical agriculture areas	257	2.31	1.07	31	2.19	.98

Table C-2. Continued.

Competency Items by Area	Instructor Employment Status					
	Full-Time			Part-Time		
	n	Mean	S.D.	n	Mean	S.D.
101 Contribute to professional literature	256	2.34	.97	31	2.03	.84
102 Participate in research studies	259	2.17	.98	31	2.03	.84
Area IX--Student Organizations (8 items)						
103 Develop creative and initiative attributes within students	258	2.52[a]	.99	31	2.16	.97
104 Promote interest in, and assist in establishing a student organization	260	2.30	1.00	31	1.90	.87
105 Assist in the development of an annual program of activities	260	2.20	.98	31	1.97	.95
106 Organize school and community support for a student organization	259	2.19	.98	31	1.97	.98
107 Conduct leadership development programs for organizational officers	259	2.21	.97	31	1.81	.98
108 Assist in the development of a constitution and by-laws of the organization	259	1.93	.91	31	1.71	.78
109 Maintain a student organization as an integral part of instruction	260	2.14	1.04	31	1.87	1.02
110 Organize competitive education activities	258	2.16	1.04	31	1.84	.90

Table C-2. Continued.

Competency Items by Area	Instructor Employment Status					
	Full-Time			Part-Time		
	n	Mean	S.D.	n	Mean	S.D.
Area X--Coordination on-the-Job (CO-OP) (8 items)						
111 Secure on-the-job training stations for students	255	2.49	1.13	31	2.26	.97
112 Develop on-the-job training plans for students	259	2.51[a]	1.13	31	2.36	1.02
113 Supervise students while placed on-the-job	262	2.32	1.10	31	2.07	1.03
114 Plan and coordinate on-the-job experience programs	262	2.36	1.08	31	2.23	1.12
115 Evaluate on-the-job experience programs and experience centers	261	2.34	1.09	31	2.00	1.00
116 Evaluate objectively student performance on-the-job	262	2.40	1.08	31	2.07	1.03
117 Conduct a training station development program	259	2.23	1.09	31	2.03	.95
118 Select on-the-job training centers	259	2.27	1.09	31	1.97	.88

[a]Designates items which received a mean rating of 2.50 or higher.

Note: Scale for inservice needs was 1=not needed, 2=somewhat needed, 3=needed, 4=greatly needed.

APPENDIX D

TABLES D-1, D-2

Table D-1. Postsecondary Agriculture Instructors' Ratings Regarding Availability of Inservice Activities by Type of Institution.

Inservice Activity	Institution Type								
	I[a]			II[b]			III[c]		
	n	Mean	S.D.	n	Mean	S.D.	n	Mean	S.D.
1 Faculty orientation program	55	2.95[d]	.91	128	2.97[d]	.95	99	2.72[d]	1.03
2 All-day program for full-time faculty	51	2.96[d]	.94	122	2.79[d]	1.10	97	2.26	1.08
3 Day or evening program for part-time faculty	48	2.48	1.01	99	2.30	1.04	78	1.95	1.16
4 Single-session workshops (teaching strategies)	54	2.74[d]	.99	126	2.35	.95	98	2.46	1.09
5 Multi-session workshops/seminars	53	2.70[d]	.85	123	2.46	.91	100	2.41	1.03
6 Individual informal consultations	54	2.63[d]	.94	122	2.54[d]	.95	97	2.70[d]	1.06
7 Formal growth contracts (individual development plan)	50	2.24	.92	116	2.15	1.00	82	2.04	1.06
8 Apprenticeships/model teacher programs	49	1.80	.84	109	1.73	.84	81	1.73	.98
9 Personal interest/enrichment sessions (hobbies, travels)	47	1.92	.88	119	2.10	.87	90	2.19	1.09
10 Sabbatical leaves	54	2.22	1.02	120	2.62[d]	1.12	100	3.17[d]	.90
11 Summer institutes	52	2.58[d]	1.05	116	2.28	1.07	90	2.27	1.08
12 Faculty exchange programs	48	1.67	.91	109	1.66	.85	90	2.38	1.08
13 Industry exchange programs	48	1.83	.95	119	1.84	.91	77	1.86	1.10

Table D-1. Continued

Inservice Activity	Institution Type								
	I[a]			II[b]			III[c]		
	n	Mean	S.D.	n	Mean	S.D.	n	Mean	S.D.
14 Retreats	48	1.63	.82	115	1.77	.88	94	2.33	1.02
15 Financial support for graduate study	51	1.53	.76	118	1.81	.99	96	2.43	1.05
16 Funding for attendance at professional meetings	57	2.88[d]	1.00	126	2.64[d]	1.02	102	2.88[d]	.98
17 Visit to other campuses	55	2.20	.93	126	2.44	.96	98	2.55[d]	1.06
18 Institutional grants for instructional projects	46	1.89	.92	121	2.12	.90	94	2.38	1.04
19 Released time to develop instructional materials	56	1.84	.97	125	1.90	.96	99	2.14	1.07

[a]Type I institution offers postsecondary agriculture programs but awards less than the Associate degree.

[b]Type II institution offers postsecondary agriculture programs but awards the Associate degree as the highest degree.

[c]Type III institution offers postsecondary agriculture programs and awards, in addition to the Associate degree, Baccalaureate or higher degrees.

[d]Designates items which received a mean rating of 2.50 or higher.

Note: Scale for inservice activities was 1=virtually never available, 2=seldom available, 3=usually available, 4=almost always available.

Table D-2. Full-Time and Part-Time Postsecondary Agriculture Instructors' Ratings Regarding the Availability of Inservice Activities.

Inservice Activity	Instructor Employment Status					
	Full-Time			Part-Time		
	n	Mean	S.D.	n	Mean	S.D.
1 Faculty orientation program	257	2.86[a]	.99	23	3.09[a]	.79
2 All-day program for full-time faculty	251	2.61[a]	1.12	17	3.06[a]	.66
3 Day or evening program for part-time faculty	202	2.15	1.08	21	2.86[a]	1.06
4 Single-session workshops (teaching strategies)	253	2.44	1.01	23	2.78[a]	1.04
5 Multi-session workshops/seminars	252	2.50[a]	.95	22	2.46	.96
6 Individual informal consultations	250	2.61[a]	1.00	21	2.76[a]	.89
7 Formal growth contracts (individual development plan)	229	2.09	.99	17	2.65[a]	1.11
8 Apprenticeships/model teacher programs	222	1.70	.87	15	2.33	.90
9 Personal interest/enrichment sessions (hobbies, travels)	237	2.07	.96	17	2.53[a]	.87
10 Sabbatical leaves	254	2.74[a]	1.09	18	2.89[a]	1.08
11 Summer institutes	238	2.32	1.08	18	2.61[a]	.98
12 Faculty exchange programs	229	1.90	1.00	16	2.38	1.09
13 Industry exchange programs	223	1.83	.97	19	2.11	1.05
14 Retreats	238	1.90	.96	17	2.49	.94
15 Financial support for graduate study	246	1.94	1.02	17	2.53[a]	1.01

Table D-2. Continued.

Inservice Activity	Instructor Employment Status					
	Full-Time			Part-Time		
	n	Mean	S.D.	n	Mean	S.D.
16 Funding for attendance at professional meetings	264	2.72[a]	1.01	19	3.42[a]	.61
17 Visit to other campuses	259	2.43	1.00	18	2.44	.98
18 Institutional grants for instructional projects	245	2.15	.97	14	2.71[a]	.83
19 Released time to develop instructional materials	258	1.97	1.01	20	2.15	1.04

[a]Designates items which received a mean rating of 2.50 or higher.

Note: Rating scale for availability of inservice activities is 1=virtually never available, 2=seldom available, 3=usually available, 4=almost always available.